

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

Claims 1-4. (cancelled)

5. (currently amended) A mobile wireless ad-hoc communications network, comprising:
a plurality of nodes for communicating with each other;~~and~~
~~at least one access point for enabling said nodes to communicate with another network;~~
wherein each of the plurality of nodes comprises a memory for storing a spreading algorithm and a plurality of spreading sequences, and
~~when a transmitting one of said nodes transmits a communications signal to another one of said nodes or a said access point, said~~
a transmitting node comprising:
a controller for using said spreading algorithm along with information pertaining to an address of another one of said nodes and at least one other factor to select a spreading sequence from said plurality of stored spreading codes, and for applying~~applies a said~~
spreading sequence to said communications signal to spread said communications signal, and
a transmitter for transmitting said spread communications signal to said
plurality of nodes; and~~said spreading sequence being selected based on information pertaining to an address of said another one of said nodes or said access point to which said transmitting node is transmitting, and information pertaining to at least one other factor.~~
said another one of said nodes comprising:
a receiver for receiving said spread communications signal, and
a controller for using said spreading algorithm along with information pertaining to said address of another one of said nodes and said at least one other factor to identify said spreading sequence from said plurality of stored spreading codes, and for applying
said spreading sequence to said communications signal to despread said communications signal.

6. (previously presented) The mobile wireless ad-hoc communications network as claimed in claim 5, wherein:

said at least one other factor includes at least one of a network prefix, time of day, and provider information.

7. (currently amended) The mobile wireless ad-hoc communications network as claimed in claim 5, further comprising ~~wherein~~:

at least one access point for enabling said nodes to communicate with another network;

said other network includes at least one of a PSTN, another ad-hoc network and the Internet.

Claims 8-11. (cancelled)

12. (currently amended) A method for communicating in a mobile wireless ad-hoc communications network, comprising:

enabling a plurality of nodes in said network to communicate with each other;

storing a spreading algorithm in a memory of each of said plurality of nodes;

storing a plurality of spreading sequences in said memory of each of said plurality of nodes;

~~establishing at least one access point for providing said nodes with access to another network; and~~

~~when a transmitting one of said nodes transmits a communications signal to another one of said nodes or a said access point, within a transmitting node of said plurality of nodes, applying a spreading sequence to said communications signal to spread said communications signal, said spreading sequence being selected from said plurality of stored spreading sequences using said spreading algorithm based on information pertaining to an address of said another one of said plurality of nodes or said access point to which said transmitting node is transmitting, and information pertaining to at least one other factor;~~

transmitting said spreaded communication signal to said another one of said plurality of nodes; and

within said another one of said plurality of nodes:

receiving said spreaded communication signal,

identifying said spreading sequence from said plurality of stored spreading sequences using said spreading algorithm based on information pertaining to said address of said another one of said plurality of nodes and information pertaining to at least one other factor;

13. (Previously Presented) The method as claimed in claim 12, wherein:

said at least one other factor includes at least one of a network prefix, time of day, and provider information.

Claims 14-18. (cancelled)

19. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network, the method comprising:

- storing a spreading algorithm in each of the plurality of nodes;
- within a first node of the plurality of nodes:
 - detecting and storing one or more network elements,
 - generating a spreading code based on the spreading algorithm functioning on a destination address of a second node and the one or more network elements,
 - spreading a transmission message destined for the second node with the spreading code, and
 - transmitting the spreaded transmission message; and

- within the second node:
 - detecting and storing the one or more network elements,
 - receiving the spreaded transmission message from the first node,
 - generating the spreading code using the spreading algorithm functioning with the destination node address and the one or more network elements, and
 - despreading the spreaded transmission message using the spreading code.

20. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 19, wherein the one or more network elements comprises one or more network elements selected from a group comprising a network prefix, a network identification, a time of day, a provider information, and a type of provider.

21. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 19, wherein:

- the storing of the one or more network elements in the first node comprises updating a first routing table in the first node using the one or more network elements, and

- the storing of the one or more network elements in the second node comprises updating a second routing table in the second node using the one or more network elements.

22. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 19, further comprising:

within a third node of the plurality of nodes:

detecting and storing a second set of one or more network elements,
generating a second spreading code based on the spreading algorithm functioning on a destination address of a fourth node and the second set of one or more network elements,
spreading a second transmission message destined for the fourth node with the second spreading code, and
transmitting the second spreaded transmission message; and

within the fourth node:

detecting and storing the second set of one or more network elements,
receiving the spreaded transmission message from the third node,
generating the second spreading code using the spreading algorithm functioning with the fourth node destination node address and the second set of one or more network elements,
and
despreading the second spreaded transmission message with the second spreading code.

23. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 22, wherein the one or more network elements comprises one or more elements selected from a group comprising a network prefix, a network identification, a time of day, a provider information, and a type of provider; and wherein the second set of one or more network elements comprises a second one or more elements selected from a group comprising a second network prefix, a second network identification, a second time of day, a second provider information, and a second type of provider.

24. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 22, wherein:

the storing of the one or more network elements in the first node comprises updating a first routing table in the first node using the one or more network elements,

the storing of the one or more network elements in the second node comprises updating a second routing table in the second node using the one or more network elements,

the storing of the second set of one or more network elements in the third node comprises updating a third routing table in the first node using the second set of one or more network elements,

the storing of the second set of one or more network elements in the fourth node comprises updating a fourth routing table in the fourth node using the second set of one or more network elements.

25. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 19, further comprising:

within the first node:

detecting and storing a second set of one or more network elements,

generating a second spreading code based on the spreading algorithm functioning on a destination address of a third node and the second set of one or more network elements,

spreading a second transmission message destined for the third node with the second spreading code, and

transmitting the spreaded second transmission message; and

within the third node:

detecting and storing the second set of one or more network elements,

receiving the second spreaded transmission message from the first node,

generating the second spreading code using the spreading algorithm functioning with the third node destination node address and the second set of one or more network elements, and

despreading the second spreaded transmission message using the second spreading code.

26. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 25, wherein the one or more network elements comprises one or more elements selected from a group comprising a network prefix, a network identification, a time of day, a provider information, and a type of provider; and wherein the second set of one or more network elements comprises a second one or more elements selected from a group comprising a second network prefix, a second network identification, a second time of day, a second provider information, and a second type of provider.

27. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 25, wherein:

the storing of the one or more network elements in the first node comprises updating a first routing table in the first node using the one or more network elements,

the storing of the one or more network elements in the second node comprises updating a second routing table in the second node using the one or more network elements,

the storing of the second set of one or more network elements in the first node comprises updating the first routing table in the first node using the second set of one or more network elements,

the storing of the second set of one or more network elements in the third node comprises updating a third routing table in the third node using the second set of one or more network elements.

28. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network, the method comprising:

- storing a spreading algorithm in each of the plurality of nodes;

- storing a plurality of spreading codes within each of the plurality of nodes;

- within a first node of the plurality of nodes:

- detecting and storing one or more network elements,

- selecting a spreading code from the plurality of stored spreading codes based on the spreading algorithm functioning on a destination address of a second node and the one or more network elements,

- spreading a transmission message destined for the second node with the selected spreading code, and

- transmitting the spreaded transmission message; and

- within the second node:

- detecting and storing the one or more network elements,

- receiving the spreaded transmission message from the first node,

- identifying the spreading code from the plurality of stored spreading codes using the spreading algorithm functioning with the destination node address and the one or more network elements, and

- despreading the spreaded transmission message using the spreading code.

29. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 28, further comprising:

within a third node of the plurality of nodes:

detecting and storing a second set of one or more network elements,

selecting a second spreading code from the plurality of stored spreading codes based on the spreading algorithm functioning on a destination address of a fourth node and the second set of one or more network elements,

spreading a second transmission message destined for the fourth node with the second spreading code, and

transmitting the second spreaded transmission message; and

within the fourth node:

detecting and storing the second set of one or more network elements,

receiving the second spreaded transmission message from the third node,

identifying the second spreading code from the plurality of stored spreading codes using the spreading algorithm functioning with the fourth node destination node address and the second set of one or more network elements, and

despreading the second spreaded transmission message with the second spreading code.

30. (new) A method for communicating messages among a plurality of nodes within an ad hoc communications network as claimed in claim 28, further comprising:

within the first node:

detecting and storing a second set of one or more network elements,

selecting a second spreading code from the plurality of stored spreading codes based on the spreading algorithm functioning on a destination address of a third node and the second set of one or more network elements,

spreading a second transmission message destined for the third node with the second spreading code, and

transmitting the spreaded second transmission message; and

within the third node:

detecting and storing the second set of one or more network elements,

receiving the second spreaded transmission message from the first node,

identifying the second spreading code from the plurality of stored spreading codes using the spreading algorithm functioning with the third node destination node address and the second set of one or more network elements, and

despreading the second spreaded transmission message using the second spreading code.